

NMCP COVID-19 Literature Report #57: Friday, 29 January 2021

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Purpose: These weekly reports, published on Fridays, are curated collections of current research, evidence reviews, special reports, grey literature, and news regarding the COVID-19 pandemic that may be of interest to medical providers, leadership, and decision makers.

All reports are available online at <https://nmcp.libguides.com/covidreport>. Access is private; you will need to use the direct link or bookmark the URL, along with the case-sensitive password "NMCPfinest".

Disclaimer: I am not a medical professional. This document is current as of the date noted above. While I make every effort to find and summarize available data, I cannot cover everything in the literature on COVID-19. Please feel free to reach out with questions, suggestions for future topics, or any other feedback.

Statistics

Global today: 101,605,084 confirmed cases and 2,194,204 deaths in 192 countries/regions

22 JAN 2021: 97,645,892 confirmed cases and 2,094,191 deaths in 191 countries/regions

15 JAN 2021: 93,275,676 confirmed cases and 1,997,704 deaths in 191 countries/regions

United States*

top 5 states by cases

	TOTAL US	CA	TX	FL	NY	IL
Cases	25,777,721	3,273,905	2,330,665	1,687,594	1,382,855	1,116,372
Deaths	433,431	39,607	36,292	26,035	43,093	21,073

*see [census.gov](https://www.census.gov) for current US Population data; NA: not all data available

[JHU CSSE](https://csse.jhu.edu) as of 1000 EDT 29 January 2021

Virginia is ranked 17th in cases and 22nd in deaths.

Virginia	Total (state)	Chesapeake	Hampton	Newport News	Norfolk	Portsmouth	Suffolk	Virginia Beach
Cases	497,912	15,210	7,076	9,635	12,667	6,499	5,714	25,762
Hospitalizations	21,241	716	228	246	676	499	302	1,077
Deaths	6,379	134	63	89	141	97	110	203

[VA DOH](https://www.vadepa.virginia.gov) as of 1000 EDT 29 January 2021

Special Reports

WHO: [COVID-19 Clinical management: living guidance](#) (updated 25 January 2021)

"This document is the update of an interim guidance originally published under the title 'Clinical management of COVID-19: interim guidance, 27 May 2020'.

Providing trustworthy guidance that is comprehensive and holistic for the optimal care of COVID-19 patients, throughout their entire illness is necessary. The previous version of the Clinical management of COVID-19 provided recommendations that can be applied when caring for patients during the COVID-19 care pathway. This guideline now also includes Best Practice Statement on caring for COVID-19 patients after their acute illness and 5 new recommendations:

- A conditional recommendation to use clinical judgment, including consideration of patients' values and preferences and local and national policy if available, to guide management decisions including admission to hospital and to the intensive care unit (ICU), rather than currently available prediction models for prognosis (very low certainty).
- A conditional recommendation for use of pulse oximetry monitoring at home as part of a package of care, including patient and provider education and appropriate follow-up in symptomatic patients with COVID-19 and risk factors for progression to severe disease who are not hospitalized (very low certainty).
- A conditional recommendation for the use of awake prone positioning in patients with severe COVID-19 that are hospitalized requiring supplemental oxygen or non-invasive ventilation (low certainty).
- A conditional recommendation to use thromboprophylaxis dosing of anticoagulation rather than intermediate or therapeutic dosing in patients hospitalized with COVID-19, without an established indication for higher dose of anticoagulation (very low certainty).
- A conditional recommendation for the use of existing care bundles (defined as three or more evidence-informed practices delivered together and consistently to improve care) chosen locally by hospital or ICU and adapted as necessary for local circumstances in patients with critical COVID-19 (very low certainty)."

Full text PDF (85 pages): https://apps.who.int/iris/bitstream/handle/10665/338871/WHO-2019-nCoV-clinical-web_annex-2021.1-eng.pdf

UK ONS: United Kingdom Office for National Statistics

[Updated estimates of the prevalence of long COVID symptoms](#) (released 21 January 2021)

"Updated experimental estimates of the five-week prevalence of COVID-19 symptoms, including breakdowns by age group and sex, using data from the UK Coronavirus Infection Survey to 14 December 2020; and the estimated number of individuals with COVID-19 in England with symptoms lasting 5 to 12 weeks in the week commencing 27 December 2020."

[The prevalence of long COVID symptoms and COVID-19 complications](#) (updated 16 December 2020)

"There has been a number of reports of COVID-19 symptoms extending beyond the acute phase of infection, colloquially termed "long COVID". A range of multiorgan complications following COVID-19 infection – including respiratory, cardiovascular, metabolic and renal impairments – have also been hypothesised among commentators. There is currently a lack of robust evidence on the prevalence of these symptoms or conditions with which to inform government policy and treatment provision....

This research strand aims to quantify the prevalence of, and risk factors for, long COVID symptoms following a confirmed or suspected infection. The Coronavirus (COVID-19) Infection Survey is a nationally-representative sample of the UK community population, and data items collected include COVID-19 test results and respondent-reported data on symptoms. To date, we have estimated that:

- Around 1 in 5 respondents testing positive for COVID-19 exhibit symptoms for a period of 5 weeks or longer
- Around 1 in 10 respondents testing positive for COVID-19 exhibit symptoms for a period of 12 weeks or longer

Using these estimates (along with the equivalent proportions for durations of 6 to 11 weeks) and the published weekly incidence rates from the COVID-19 Infection Survey (see Table 2a in the data tables section of that release), we estimate that during the week commencing 22 November 2020, around 186,000 people in private households in England were living with symptoms that had persisted for between 5 and 12 weeks, with a 95% confidence interval of 153,000 to 221,000."

Selected Literature: Peer-Reviewed Journals

29 January 2021

JAMA Pediatr: [Assessment of Maternal and Neonatal Cord Blood SARS-CoV-2 Antibodies and Placental Transfer Ratios](#)

"Question: What is the association between maternal and neonatal severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2)–specific antibody concentrations?

Findings: In this cohort study, SARS-CoV-2 IgG antibodies were transferred across the placenta in 72 of 83 pregnant women who were seropositive, and cord blood IgG concentrations were directly associated with maternal antibody concentrations, whereas IgM antibodies were not detected in any cord blood sera. Transfer ratios were associated with time elapsed from maternal infection to delivery and not associated with severity of maternal infection.

Meaning: Efficient transplacental transfer of SARS-CoV-2 IgG antibodies supports the potential for maternally derived antibodies to provide neonatal protection from SARS-CoV-2 infection."

MMWR: [Impact of COVID-19 on Cervical Cancer Screening Rates Among Women Aged 21–65 Years in a Large Integrated Health Care System — Southern California, January 1–September 30, 2019, and January 1–September 30, 2020](#)

"What is already known about this topic? Cancer screening rates, including cervical cancer screening rates, have declined during the COVID-19 pandemic.

What is added by this report? During California's stay-at-home order, cervical cancer screening rates among approximately 1.5 million women in the Kaiser Permanente Southern California (KPSC) network decreased approximately 80% compared with baseline. The decrease was similar across all racial/ethnic groups of KPSC and returned to near normal after reopening.

What are the implications for public health practice? Sustained disruptions could lead to increased risk for cervical cancers and precancers. During a pandemic, bringing populations at higher risk back to screening first, such as those with abnormal results or increased risk for precancers and cancers, is important."

28 January 2021

J Public Health Policy: [Governmental actions to address COVID-19 misinformation](#)

"Since COVID-19 emerged, a plethora of misinformation has undermined the public's ability to identify reliable sources of accurate information. To identify the range of methods governments used to address COVID-19 misinformation, we conducted a content analysis of international media and evaluated government actions in light of international law, which protects freedom of expression and calls on governments to guarantee this fundamental right even during a pandemic or other emergency. We identified five categories of government activities: (1) disseminating and increasing access to accurate information; (2) restricting access to accurate information; (3) disseminating disinformation, false information, and misinformation; (4) addressing commercial fraud; and (5) criminalizing expression. The goal of addressing COVID-19 misinformation is best served by protecting expression, disseminating factual information, ensuring strong protections for whistleblowers, and supporting an independent media environment. Conversely, governments undermine public health when they create a state of uncertainty and violate human rights."

JAMA Netw Open: [Outcomes of COVID-19 Among Hospitalized Health Care Workers in North America](#)

"Question: Are health care workers (HCWs) at risk of worse outcomes associated with coronavirus disease 2019 (COVID-19) compared with the general population?

Findings: This propensity-matched multicenter cohort study included 122 HCWs hospitalized with COVID-19 matched to 366 non-HCWs hospitalized with COVID-19. The odds of the primary outcome—mechanical ventilation or death—were not significantly different for HCWs compared with non-HCWs.

Meaning: This study finds that HCW status is not associated with poorer outcomes among patients hospitalized with COVID-19."

27 January 2021

JAMA Netw Open: [Respiratory and Psychophysical Sequelae Among Patients With COVID-19 Four Months After Hospital Discharge](#)

"Question: What respiratory, functional, and psychological sequelae are associated with recovery from coronavirus disease 2019 (COVID-19)?

Findings: In this cohort study of 238 patients with COVID-19 hospitalized in an academic hospital in Northern Italy, more than half of participants had a significant reduction of diffusing lung capacity for carbon monoxide or measurable functional impairment and approximately one-fifth of patients had symptoms of posttraumatic stress 4 months after discharge.

Meaning: These findings suggest that despite virological recovery, a sizable proportion of patients with COVID-19 experienced respiratory, functional, or psychological sequelae months after hospital discharge."

JAMA Psychiatry: [Association of Psychiatric Disorders With Mortality Among Patients With COVID-19](#)

"Question: Is a diagnosis of schizophrenia spectrum, mood, or anxiety disorders associated with increased risk of mortality in patients with coronavirus disease 2019 (COVID-19)?

Findings: In this cohort study of 7348 adults with laboratory-confirmed COVID-19 in a New York health system, a schizophrenia spectrum diagnosis was associated with an increased risk of death after adjusting for demographic and medical risk factors. Mood and anxiety disorders were not associated with increased risk of mortality.

Meaning: A diagnosis of a schizophrenia spectrum disorder may be a risk factor for mortality in patients with COVID-19."

Pediatrics: [SARS-CoV-2 Transmission Dynamics in a Sleep-Away Camp](#)

"Objective: In late June 2020, a large outbreak of COVID-19 occurred at a sleep-away youth camp in Georgia affecting primarily persons ≤ 21 years. We conducted a retrospective cohort study among campers and staff (attendees) to determine the extent of the outbreak and assess factors contributing to transmission.

Methods: Attendees were interviewed to ascertain demographic characteristics, known exposures to cases and community exposures, and mitigation measures before, during, and after attending camp. COVID-19 case status was determined for all camp attendees based on SARS-CoV-2 test results and reported symptoms. We calculated attack rates and instantaneous reproduction numbers, and sequenced SARS-CoV-2 viral genomes from the outbreak.

Results: Among 627 attendees, median age was 15 years (interquartile range: 12–16 years); 56% (351/627) were female. The attack rate was 56% (351/627) among all attendees. Based on date of illness onset or first positive specimen collected, 12 cases were infected before arriving at camp, and 339 cases were camp-associated. Among 288 cases with available symptom information, 45 (16%) were asymptomatic. Despite cohorting, 50% of attendees reported direct contact with people outside their cabin cohort. On the first day of camp session, the instantaneous reproduction number was 10. Viral genomic diversity was low.

Conclusions: Few introductions of SARS-CoV-2 into a youth congregate setting resulted in a large outbreak. Testing strategies should be combined with pre-arrival quarantine, routine symptom monitoring with appropriate isolation and quarantine, cohorting, social

distancing, mask wearing, and enhanced disinfection and hand hygiene. Promotion of mitigation measures among younger populations is needed."

26 January 2021

Am J Obstetr Gynecol: [Disease Severity, Pregnancy Outcomes and Maternal Deaths among Pregnant Patients with SARS-CoV-2 Infection in Washington State](#)

"Evidence is accumulating that coronavirus disease 2019 (COVID-19) increases the risk for hospitalization and mechanical ventilation in pregnant patients and for preterm delivery. However, the impact on maternal mortality and whether morbidity is differentially affected by disease severity at delivery and trimester of infection is unknown.

To describe disease severity and outcomes of SARS-CoV-2 infections in pregnancy across Washington State including pregnancy complications and outcomes, hospitalization, and case fatality.

Pregnant patients with a polymerase chain reaction confirmed SARS-CoV-2 infection between March 1 and June 30, 2020 were identified in a multi-center retrospective cohort study from 35 sites in Washington State. Sites captured 61% of annual state deliveries. Case fatality rates in pregnancy were compared to COVID-19 fatality rates in similarly aged adults in Washington State using rate ratios and rate differences. Maternal and neonatal outcomes were compared by trimester of infection and disease severity at the time of delivery.

The principal study findings were: 1) among 240 pregnant patients in Washington State with SARS-CoV-2 infections, 1 in 11 developed severe or critical disease, 1 in 10 were hospitalized for COVID-19, and 1 in 80 died; 2) the COVID-19-associated hospitalization rate was 3.5-fold higher than in similarly-aged adults in Washington State [10.0% vs. 2.8%; rate ratio (RR) 3.5, 95% confidence interval (CI) 2.3-5.3]; 3) pregnant patients hospitalized for a respiratory concern were more likely to have a comorbidity or underlying conditions including asthma, hypertension, type 2 diabetes, autoimmune disease, and Class III obesity; 4) three maternal deaths (1.3%) were attributed to COVID-19 for a maternal mortality rate of 1,250/100,000 pregnancies (95%CI 257-3,653); 5) the COVID-19 case fatality in pregnancy was a significant 13.6-fold (95%CI 2.7-43.6) higher in pregnant patients compared to similarly aged individuals in Washington State with an absolute difference in mortality rate of 1.2% (95%CI -0.3-2.6); and 6) preterm birth was significantly higher among women with severe/critical COVID-19 at delivery than for women who had recovered from COVID-19 (45.4% severe/critical COVID-19 vs. 5.2% mild COVID-19, p<0.001).

COVID-19 hospitalization and case fatality rates in pregnant patients were significantly higher compared to similarly aged adults in Washington State. This data indicates that

pregnant patients are at risk for severe or critical disease and mortality compared to non-pregnant adults, as well as preterm birth."

JAMA Netw Open: [Prevalence and Risk Factors Associated With Self-reported Psychological Distress Among Children and Adolescents During the COVID-19 Pandemic in China](#)

"Question: What factors are associated with self-reported psychological distress among school-aged children and adolescents during the COVID-19 pandemic?

Findings: In this cross-sectional study including 1 199 320 children and adolescents, the prevalence of self-reported psychological distress was 10.5%. Students who never wore a face mask were at higher risk for psychological distress compared with students who wore a face mask frequently, as were students who spent less than 0.5 hours exercising compared with students who spent more than 1 hour in exercising.

Meaning: These findings suggest that the prevalence of self-reported psychological distress among school-aged children and adolescents during the COVID-19 pandemic was relatively high."

MMWR: [COVID-19 Cases and Transmission in 17 K–12 Schools — Wood County, Wisconsin, August 31–November 29, 2020](#)

"What is already known about this topic? COVID-19 outbreaks related to kindergarten through grade 12 (K–12) classroom settings have been rarely reported; however, in-school transmission risk has not been well described.

What is added by this report? Among 17 rural Wisconsin schools, reported student mask-wearing was high, and the COVID-19 incidence among students and staff members was lower than in the county overall (3,453 versus 5,466 per 100,000). Among 191 cases identified in students and staff members, only seven (3.7%) cases, all among students, were linked to in-school spread.

What are the implications for public health practice? With masking requirements and student cohorting, transmission risk within schools appeared low, suggesting that schools might be able to safely open with appropriate mitigation efforts in place."

25 January 2021

Clin Infect Dis: [Assessment of U.S. health care personnel \(HCP\) attitudes towards COVID-19 vaccination in a large university health care system](#)

"We conducted a cross-sectional survey of HCP, including clinical and non-clinical staff, researchers, and trainees between November 23 rd ,2020 and December 5 th ,2020. The survey evaluated attitudes, beliefs and willingness to get vaccinated.

A total of 5287 respondents had a mean age of 42.5 years (SD=13.56), and were 72.8% female (n=3842). Overall 57.5 % of individuals expressed intent to receive COVID-19 vaccine. 80.4% were physicians and scientists representing the largest group. 33.6% of registered nurses, 31.6% of allied health professionals, and 32% of master's level clinicians were unsure they would take the vaccine ($p<.001$). Respondents who were older, males, White, or Asian were more likely to get vaccinated compared to other groups. Vaccine safety, potential adverse events, efficacy and speed of vaccine development dominated concerns listed by participants. Fewer (54.0%) providers of direct care vs. non-care providers (62.4%), and 52.0% of those who had provided care for COVID-19 patients (vs. 60.6% of those who had not) indicated they would take the vaccine if offered ($p<.001$).

We observed that self-reported willingness to receive vaccination against COVID-19 differs by hospital roles, with physicians and research scientists showing the highest acceptance. These findings highlight important heterogeneity in personal attitudes among HCPs around COVID-19 vaccines and highlight a need for tailored communication strategies."

Emerg Infect Dis: [Prevalence of SARS-CoV-2 Antibodies in First Responders and Public Safety Personnel, New York City, New York, USA, May–July 2020](#)

"We conducted a serologic survey in public service agencies in New York City, New York, USA, during May–July 2020 to determine prevalence of severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) infection among first responders. Of 22,647 participants, 22.5% tested positive for SARS-CoV-2-specific antibodies. Seroprevalence for police and firefighters was similar to overall seroprevalence; seroprevalence was highest in correctional staff (39.2%) and emergency medical technicians (38.3%) and lowest in laboratory technicians (10.1%) and medicolegal death investigators (10.8%). Adjusted analyses demonstrated association between seropositivity and exposure to SARS-CoV-2-positive household members (adjusted odds ratio [aOR] 3.52 [95% CI 3.19–3.87]), non-Hispanic Black race or ethnicity (aOR 1.50 [95% CI 1.33–1.68]), and severe obesity (aOR 1.31 [95% CI 1.05–1.65]). Consistent glove use (aOR 1.19 [95% CI 1.06–1.33]) increased likelihood of seropositivity; use of other personal protective equipment had no association. Infection control measures, including vaccination, should be prioritized for frontline workers."

MMWR: [Allergic Reactions Including Anaphylaxis After Receipt of the First Dose of Moderna COVID-19 Vaccine — United States, December 21, 2020–January 10, 2021](#)

What is already known about this topic? Anaphylaxis is a severe, life-threatening allergic reaction that occurs rarely after vaccination.

What is added by this report? During December 21, 2020–January 10, 2021, monitoring by the Vaccine Adverse Event Reporting System detected 10 cases of anaphylaxis after administration of a reported 4,041,396 first doses of Moderna COVID-19 vaccine (2.5 cases

per million doses administered). In nine cases, onset occurred within 15 minutes of vaccination. No anaphylaxis-related deaths were reported.

What are the implications for public health practice? "Locations administering COVID-19 vaccines should adhere to CDC guidance, including screening recipients for contraindications and precautions, having necessary supplies and staff members available to manage anaphylaxis, implementing recommended postvaccination observation periods, and immediately treating suspected anaphylaxis with intramuscular epinephrine injection."

MMWR: [Implementation and Evolution of Mitigation Measures, Testing, and Contact Tracing in the National Football League, August 9–November 21, 2020](#)

"What is added by this report? The National Football League observed SARS-CoV-2 transmission after <15 minutes of cumulative interaction, leading to a revised definition of a high-risk contact that evaluated mask use and ventilation in addition to duration and proximity of interaction. Intensive mitigation protocols effectively reduced close interactions.

What are the implications for public health practice? Assessment of the context of each interaction, including mask use, indoor versus outdoor setting, and ventilation, in addition to duration and proximity, can improve identification of high-risk contacts during contact tracing. Postexposure quarantine based on redefined high-risk criteria, combined with testing and environment-specific intensive protocols, can protect communities before and after case identification."

During the 2020 NFL season, safety protocols helped limit spread of COVID-19

Expanded contact definition to consider	Implemented strict protocols after any exposure	
DISTANCE	<input checked="" type="checkbox"/> Quarantine for high-risk contacts	189 players and staff quarantined after contact*
TIME	<input checked="" type="checkbox"/> Closure of eating areas	20 tested positive
MASK USE	<input checked="" type="checkbox"/> Strict mask requirements	No additional spread occurred
VENTILATION/ AIR FLOW		

* During Oct. 15–Nov. 21

CDC.GOV bit.ly/MMWR12521 MMWR

Nature: [Global absence and targeting of protective immune states in severe COVID-19](#)

"While SARS-CoV-2 infection has pleiotropic and systemic effects in some patients^{1–3}, many others experience milder symptoms. We sought a holistic understanding of the severe/mild distinction in COVID-19 pathology, and its origins. We performed a whole-blood preserving single-cell analysis protocol to integrate contributions from all major cell types including neutrophils, monocytes, platelets, lymphocytes and the contents of serum. Patients with mild COVID-19 disease display a coordinated pattern of interferon-stimulated gene (ISG) expression³ across every cell population and these cells are systemically absent in patients with severe disease. Severe COVID-19 patients also paradoxically produce very high anti-SARS-CoV-2 antibody titers and have lower viral load as compared to mild disease. Examination of the serum from severe patients demonstrates that they uniquely produce antibodies that functionally block the production of the mild disease-associated ISG-expressing cells, by engaging conserved signaling circuits that dampen cellular responses to interferons. Overzealous antibody responses pit the immune system against itself in many COVID-19 patients and perhaps in other viral infections and this study defines targets for immunotherapies in severe patients to re-engage viral defense."

Preprint posted on [bioRxiv](https://www.biorxiv.org/content/10.1101/2020.10.29.269150.full.pdf) on 29 October 2020.

23 January 2021

Clin Respir J: [Should CT be used for the diagnosis of RT-PCR negative suspected COVID-19 patients?](#)

"The diagnosis of patients with Coronavirus disease 2019 suspicion (COVID-19) but negative reverse transcriptase-polymerase chain reaction (RT-PCR) test is challenging.

We aimed to investigate the diagnostic value of chest computed tomography (CT) in RT-PCR negative patients with suspected COVID-19.

The study included patients who were admitted to our hospital with suspicion of COVID-19 between April 1 and April 30, 2020, who tested negative after RT-PCR test, and who underwent CT. Initial CT findings were classified as typical, indeterminate, atypical for COVID-19, and negative for pneumonia. Incidental findings on CT were noted.

Of the 338 patients with a mean age of 57 years (min 18 years -max 96 years), 168 (%49.70) were male and 170 (%50.29) were female. The most common symptoms were cough (58.87%), fever (40.82%), and dyspnea (39.34%). The CT findings were typical for COVID-19 in 109 (32.24%) patients, indeterminate in 47 (13.90%) patients, and atypical in 77 (22.78%) patients. The CT findings of 105 (31.06%) patients were negative for pneumonia. Incidental lung nodules suspicious of malignancy were identified in 7 patients. Seventy-seven patients

(%22.78) had extrapulmonary incidental findings. Conclusion: The diagnostic value of CT in RT-PCR negative patients with suspected COVID-19 is not very high. Based on clinical, laboratory, and chest x-ray findings, it may be more appropriate to refer patients to CT after the first triage, when necessary."

22 January 2021

Ann Intern Med: [The Proportion of SARS-CoV-2 Infections That Are Asymptomatic: A Systematic Review](#)

"Purpose: To estimate the proportion of persons infected with SARS-CoV-2 who never develop symptoms.

Data sources: Searches of Google News, Google Scholar, medRxiv, and PubMed using the keywords antibodies, asymptomatic, coronavirus, COVID-19, PCR, seroprevalence, and SARS-CoV-2.

Data synthesis: Sixty-one eligible studies and reports were identified, of which 43 used polymerase chain reaction (PCR) testing of nasopharyngeal swabs to detect current SARS-CoV-2 infection and 18 used antibody testing to detect current or prior infection. In the 14 studies with longitudinal data that reported information on the evolution of symptomatic status, nearly three quarters of persons who tested positive but had no symptoms at the time of testing remained asymptomatic. The highest-quality evidence comes from nationwide, representative serosurveys of England (n = 365 104) and Spain (n = 61 075), which suggest that at least one third of SARS-CoV-2 infections are asymptomatic.

Conclusion: Available data suggest that at least one third of SARS-CoV-2 infections are asymptomatic. Longitudinal studies suggest that nearly three quarters of persons who receive a positive PCR test result but have no symptoms at the time of testing will remain asymptomatic. Control strategies for COVID-19 should be altered, taking into account the prevalence and transmission risk of asymptomatic SARS-CoV-2 infection."

JAMA: [Change in Reported Adherence to Nonpharmaceutical Interventions During the COVID-19 Pandemic, April–November 2020](#)

"This study uses national survey data to describe overall and regional trends in adherence to protective behaviors (mask-wearing, physical distancing, staying at home, others) among US adults during the COVID-19 pandemic from April–November 2020."

JAMA Intern Med: [Association of Smoking and Cumulative Pack-Year Exposure With COVID-19 Outcomes in the Cleveland Clinic COVID-19 Registry](#)

"This cohort study assesses the association of cumulative smoking exposure, as measured by pack-years, with outcomes of patients with coronavirus disease 2019."

JAMA Pediatr: [Prevalence of SARS-CoV-2 Infection in Children and Their Parents in Southwest Germany](#)

"Question: What is the rate of severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) infections and the seroprevalence of SARS-CoV-2 antibodies in children aged 1 to 10 years and a corresponding parent in a population-based sample in southwest Germany?"

Findings: This large-scale, multicenter, cross-sectional investigation of 4964 participants accurately determined anti-SARS-CoV-2 seropositivity by combining the results of enzyme-linked immunosorbent assay and immunofluorescence tests. The estimated SARS-CoV-2 seroprevalence was low in parents (1.8%) and 3-fold lower in children (0.6%).

Meaning: The low seroprevalence of SARS-CoV-2 antibodies in young children in this study may indicate that they do not play a key role in SARS-CoV-2 spreading during the current pandemic"

21 January 2021

Am J Hematol: [Immune Thrombocytopenia in a 22-Year-Old Post Covid-19 Vaccine](#)

"A hematologist from Advocate Aurora Health in Wisconsin presents the case of a 22-year-old male with no history of bleeding or autoimmune disease who presented with widespread petechiae (Figure 1) and gum bleeding 3 days post-Pfizer-BioNTech vaccine. The patient had severe thrombocytopenia ($2 \times 10^9/L$) and was given a platelet transfusion on admission followed by intravenous immunoglobulin and dexamethasone (see summary). He was discharged on day 6 with a platelet count of $28 \times 10^9/L$, which normalized by day 11 ($173 \times 10^9/L$). Authors suggest this patient's autoimmune thrombocytopenia (ITP) may have been induced by vaccine administration, but recognize ITP is common and further studies are needed to better evaluate this potential side effect."

(summary from [COVID-19 LST 26 January 2021](#))

JCI Insight: [Effective virus-neutralizing activities in antisera from the first wave of severe COVID-19 survivors](#)

"The pandemic of Coronavirus Disease 19 (COVID-19), caused by severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), has become one of the worst public health crises. However, knowledge about the dynamics of antibody responses in COVID-19 patients is still

poorly understood. In this study, we performed serological study with serum specimens collected at the acute and the convalescent phases from 104 severe COVID-19 patients who were the first wave of COVID-19 cases in Wuhan, China. Our findings uncovered that neutralizing antibodies to SARS-CoV-2 are persistent at least for more than 6 months in severe COVID-19 patients, despite that immunoglobulin G (IgG) levels against receptor binding domain (RBD) and nucleocapsid protein (N) IgG declined from the acute to the convalescent phase. Moreover, we demonstrate that the level of RBD-IgG is capable of correlating with SARS-CoV-2-neutralizing activities in COVID-19 serum. In summary, our findings identify the magnitude, functionality and longevity of antibody responses in COVID-19 patients, which sheds light on better understanding of humoral immune response to COVID-19, and would be beneficial for developing vaccines."

Lancet Infect Dis: [Safety and immunogenicity of an inactivated SARS-CoV-2 vaccine, BBV152: a double-blind, randomised, phase 1 trial](#)

"We report the preliminary analyses for the safety and immunogenicity of the vaccine candidate BBV152 in 375 vaccinated adults. All vaccine groups had similar reactogenicity and serological outcomes to the control group. BBV152 led to enhanced immune responses; the 3- μ g and 6- μ g Algel-IMDG vaccines induced T-cell responses that were biased to T-helper-1 cells.

Findings from other inactivated SARS-CoV-2 vaccine candidates are corroborating. However, to the best of our knowledge, ours is the only reported inactivated COVID-19 vaccine candidate inducing cell-mediated responses and humoral neutralising responses. Both Algel-IMDG formulations will be assessed in a phase 2 immunogenicity trial."

Science: [Model-informed COVID-19 vaccine prioritization strategies by age and serostatus](#)

"Limited initial supply of SARS-CoV-2 vaccine raises the question of how to prioritize available doses. Here, we used a mathematical model to compare five age-stratified prioritization strategies. A highly effective transmission-blocking vaccine prioritized to adults ages 20-49 years minimized cumulative incidence, but mortality and years of life lost were minimized in most scenarios when the vaccine was prioritized to adults over 60 years old. Use of individual-level serological tests to redirect doses to seronegative individuals improved the marginal impact of each dose while potentially reducing existing inequities in COVID-19 impact. While maximum impact prioritization strategies were broadly consistent across countries, transmission rates, vaccination rollout speeds, and estimates of naturally acquired immunity, this framework can be used to compare impacts of prioritization strategies across contexts."

20 January 2021

Pediatr Pulmonol: [Seroprevalence of anti-SARS-CoV-2 IgG antibodies in children with household exposure to adults with COVID-19: preliminary findings](#)

"Weather and the susceptibility of children to SARS-CoV-2 infection is still a debated question and currently a hot topic, particularly in view of important decisions regarding opening schools. Therefore, we performed this prospective analysis of anti-SARS-CoV-2 IgG antibodies in children with known household exposure to SARS-CoV-2 and compared their IgG status with the other adults exposed to the index case in the same household.

30 families with a documented COVID-19 index case were included. A total of 44 out of 80 household contacts (55%) of index patients had anti SARS-CoV-2 IgG antibodies. In particular, 16/27 (59,3%) adult partners had IgG antibodies compared with 28/53 (52,3%) of pediatric contacts ($P > 0.05$). Among the pediatric population, children ≥ 5 years of age had a similar probability of having SARS-CoV-2 IgG antibodies (21/39, 53.8%) compared to those < 5 years old (7/14, 50%) ($P > 0.05$). Adult partners and children also had a similar probability of having SARS-CoV-2 IgG antibodies. Interestingly, 10/28 (35.7%) of children and 5/27 (18.5%) of adults with SARS-CoV-2 IgG antibodies were previously diagnosed as COVID-19 cases.

Our study shows evidence of a high rate of IgG antibodies in children exposed to SARS-CoV-2. This report has public health implications, highlighting the need to establish appropriate guidelines for school openings and other social activities related to childhood."

Virchows Arch: [Autopsy findings after long-term treatment of COVID-19 patients with microbiological correlation](#)

"Between April and June 2020, i.e., during the first wave of pandemic coronavirus disease 2019 (COVID-19), 55 patients underwent long-term treatment in the intensive care unit at the University Hospital of Regensburg. Most of them were transferred from smaller hospitals, often due to the need for an extracorporeal membrane oxygenation system. Autopsy was performed in 8/17 COVID-19-proven patients after long-term treatment (mean: 33.6 days). Autopsy revealed that the typical pathological changes occurring during the early stages of the disease (e.g., thrombosis, endothelitis, capillaritis) are less prevalent at this stage, while severe diffuse alveolar damage and especially coinfection with different fungal species were the most conspicuous finding. In addition, signs of macrophage activation syndrome was detected in 7 of 8 patients. Thus, fungal infections were a leading cause of death in our cohort of severely ill patients and may alter clinical management of patients, particularly in long-term periods of treatment."

ICYMI (older than the last 2 weeks)

Infect Control Hosp Epidemiol: [Characterization of handheld disinfectant sprayers for effective surface decontamination to mitigate SARS-CoV-2 transmission](#) (online 13 January 2021)

"With schools reopening, an increasing number of custodians are applying disinfectant spray methods to decontaminate frequently touched surfaces, including school supplies, walls, desks, and chairs, to mitigate SARS-CoV-2 virus transmission between students, and teachers and students in the classroom. In this research, we present a novel characterization method to evaluate disinfectant droplet size and coverage for two types of commonly used disinfectant sprayers and suggest the optimum application practice for them."

Clin Microbiol Infect: [Six-month antibody response to SARS-CoV-2 in healthcare workers assessed by virus neutralisation and commercial assays](#) (online 12 January 2021)

"A letter to the editor of the journal "Clinical Microbiology and Infection" penned by researchers in the Laboratoire de Virologie at the Institut des Agents Infectieux in Lyon, France reviews the Trouillet-Assant et al study "Assessment of 90 serological techniques for screening patients for COVID-19 (COVID-SER): a prospective, 91 multicentric study," discussing the potential of virus neutralisation assay (VNA) to assess for antibodies in previously SARS-CoV-2 positive patients. In the study, 6 months after 296 healthcare workers had SARS-CoV-2 infection, 51% had neutralizing antibody (NAb), 55.4% were positive on the Architect Assay, 84.8% on the Vidas Assay, and 100% on the Wantai assay, and those with a NAb titer greater than 80 were more likely to have a Vidas ratio greater than 8 (Figure). This study suggests that certain assays could be utilized to screen for antibodies in recovered SARS-CoV-2 patients." (summary from [22 Jan 2021 COVID-19 LST](#))

Environ Sci Technol: [The Escalating Biomedical Waste Management To Control the Environmental Transmission of COVID-19 Pandemic: A Perspective from Two South Asian Countries](#) (online 12 January 2021)

"The global pandemic COVID-19 culminated in escalating biomedical waste (BMW) worldwide, and the management authorities are struggling with waste treatment. Bangladesh and India are two densely populated South Asian developing countries with limited resources. Both countries face mass community transmission of the disease, with India facing severe infections and deaths. Predictably, a large population might sum up to a large amount of COVID-19-related BMW. There is also the question of capacity, whether the existing BMW policies and regulations of the regions can manage the BMW strategically driven by the pressure of the pandemic. Here, we have shown a framework leading to further environmental and community transmission of the COVID-19 pandemic if the BMW generated at healthcare facilities and homes is not appropriately managed. The BMW, such as safety suits or personal protective equipment (PPE), masks, gloves, and shields, would

likely damage the environment in the long run by creating microplastic pollution. Modification and modernization of the existing policies, plans, and guidelines on the proper management of the hospital and household infectious waste is suggested. Moreover, occupational health and safety assessments for waste management workers at the hospitals are recommended. Installing suitable capacity incinerators and related infrastructures are recommended for appropriate waste management. In the absence of incinerators, the existing industrial furnaces, cement kilns, and mobile incinerators can be used with a rapid impact assessment adhering to the appropriate implementations of the policies and guidelines."

J Infect Dis: [Early differences in cytokine production distinguish severity of COVID-19](#) (online 07 January 2021)

"Most COVID-19 patients experience asymptomatic/mild symptoms, but some suffer critical symptoms requiring intensive care. It is important to determine how asymptomatic/mild patients react to SARS-CoV-2 infection and suppress virus spread. Innate immunity is important for evasion from the first virus attack, and it may play an important role in the pathogenesis in these patients. We measured serum cytokine levels of 95 COVID-19 patients during the infection's acute phase and are first to report that significantly higher IL-12 and IL-2 levels were induced in asymptomatic/mild patients versus those in the moderate/severe patients, indicating these cytokines' key roles in asymptomatic/mild infections' pathogenesis."

Selected Literature: Preprints

Preprints are found on preprint servers such as [arXiv](#), [bioRxiv](#), and [medRxiv](#); they are commonly used for biomedical research. Preprints may later be published in peer-reviewed journals. Per medRxiv: "Preprints are preliminary reports of work that have not been certified by peer review. They should not be relied on to guide clinical practice or health-related behavior and should not be reported in news media as established information."

[medRxiv: The Airborne Contagiousness of Respiratory Viruses: A Comparative Analysis and Implications for Mitigation](#) (posted 29 January 2021)

"Background: The infectious emission rate is a critical input parameter for airborne contagion models, but data are limited due to reliance on estimates from chance superspreading events. A predictive estimation approach for the quanta emission rate (ERq) was recently proposed for SARS-CoV-2 using the droplet volume concentration of various expiratory activities. This study assesses the strength of the approach and uses novel predictive estimates of ERq to compare the contagiousness of respiratory pathogens.

Methods: We applied the predictive approach to SARS-CoV-1, SARS-CoV-2, MERS, measles virus, adenovirus, rhinovirus, coxsackievirus, seasonal influenza virus and Mycobacterium tuberculosis (TB) and compared ER_q estimates to values reported in literature. We calculated infection risk in a prototypical classroom and barracks to assess the relative ability of ventilation to mitigate airborne transmission.

Results: Our median standing and speaking ER_q estimate for SARS-CoV-2 (2.6 quanta hour (h)⁻¹) is similar to active, untreated TB (3.1 h⁻¹), higher than seasonal influenza (0.17 quanta h⁻¹), and lower than measles virus (15 quanta h⁻¹). We calculated event reproduction numbers above 1 for SARS-CoV-2, measles virus, and untreated TB in both the classroom and barracks for an activity level of standing and speaking at low, medium and high ventilation rates of 2.3, 6.6 and 14 liters per second per person, respectively.

Conclusions: Our predictive ER_q estimates are consistent with the range of values reported over decades of research. In congregate settings, current ventilation standards are unlikely to control the spread of viruses with upper quartile ER_q values above 10 quanta h⁻¹, such as SARS-CoV-2, indicating the need for additional control measures."

bioRxiv: [Neutralization of spike 69/70 deletion, E484K, and N501Y SARS-CoV-2 by BNT162b2 vaccine-elicited sera](#) (posted 27 January 2021)

"We engineered three SARS-CoV-2 viruses containing key spike mutations from the newly emerged United Kingdom (UK) and South African (SA) variants: N501Y from UK and SA; 69/70-deletion+N501Y+D614G from UK; and E484K+N501Y+D614G from SA. Neutralization geometric mean titers (GMTs) of twenty BNT162b2 vaccine-elicited human sera against the three mutant viruses were 0.81- to 1.46-fold of the GMTs against parental virus, indicating small effects of these mutations on neutralization by sera elicited by two BNT162b2 doses."

medRxiv: [Efficacy of Colchicine in Non-Hospitalized Patients with COVID-19](#) (posted 27 January 2021)

"Background Evidence suggests the role of an inflammatory storm in COVID-19 complications. Colchicine is an orally administered, anti-inflammatory medication beneficial in gout, pericarditis and coronary disease.

Methods We performed a randomized, double-blind trial involving non-hospitalized patients with COVID-19 diagnosed by polymerase chain reaction (PCR) testing or clinical criteria. The patients were randomly assigned to receive colchicine (0.5 mg twice daily for 3 days and once daily thereafter) or placebo for 30 days. The primary efficacy endpoint was the composite of death or hospitalization for COVID-19.

Results A total of 4488 patients were enrolled. The primary endpoint occurred in 4.7% of the patients in the colchicine group and 5.8% of those in the placebo group (odds ratio, 0.79; 95.1% confidence interval (CI), 0.61 to 1.03; P=0.08). Among the 4159 patients with

PCR-confirmed COVID-19, the primary endpoint occurred in 4.6% and 6.0% of patients in the colchicine and placebo groups, respectively (odds ratio, 0.75; 95% CI, 0.57 to 0.99; P=0.04). In these patients with PCR-confirmed COVID-19, the odds ratios were 0.75 (95% CI, 0.57 to 0.99) for hospitalization due to COVID-19, 0.50 (95% CI, 0.23 to 1.07) for mechanical ventilation, and 0.56 (95% CI, 0.19 to 1.66) for death. Serious adverse events were reported in 4.9% and 6.3% in the colchicine and placebo groups (P=0.05); pneumonia occurred in 2.9% and 4.1% of patients (P=0.02). Diarrhea was reported in 13.7% and 7.3% in the colchicine and placebo groups (P<0.0001).

Conclusion Among non-hospitalized patients with COVID-19, colchicine reduces the composite rate of death or hospitalization."

bioRxiv: [mRNA-1273 vaccine induces neutralizing antibodies against spike mutants from global SARS-CoV-2 variants](#) (posted 25 January 2021)

"Severe acute respiratory syndrome coronavirus-2 (SARS-CoV-2) is the causative infection of a global pandemic that has led to more than 2 million deaths worldwide. The Moderna mRNA-1273 vaccine has demonstrated ~94% efficacy in a Phase 3 study and has been approved under Emergency Use Authorization. The emergence of SARS-CoV-2 variants with mutations in the spike protein, most recently circulating isolates from the United Kingdom (B.1.1.7) and Republic of South Africa (B.1.351), has led to lower neutralization from convalescent serum by pseudovirus neutralization (PsVN) assays and resistance to certain monoclonal antibodies. Here, using two orthogonal VSV and lentivirus PsVN assays expressing spike variants of 20E (EU1), 20A.EU2, D614G-N439, mink cluster 5, B.1.1.7, and B.1.351 variants, we assessed the neutralizing capacity of sera from human subjects or non-human primates (NHPs) that received mRNA-1273. No significant impact on neutralization against the B.1.1.7 variant was detected in either case, however reduced neutralization was measured against the mutations present in B.1.351. Geometric mean titer (GMT) of human sera from clinical trial participants in VSV PsVN assay using D614G spike was 1/1852. VSV pseudoviruses with spike containing K417N-E484K-N501Y-D614G and full B.1.351 mutations resulted in 2.7 and 6.4-fold GMT reduction, respectively, when compared to the D614G VSV pseudovirus. Importantly, the VSV PsVN GMT of these human sera to the full B.1.351 spike variant was still 1/290, with all evaluated sera able to fully neutralize. Similarly, sera from NHPs immunized with 30 or 100 μ g of mRNA-1273 had VSV PsVN GMTs of ~ 1/323 or 1/404, respectively, against the full B.1.351 spike variant with a ~ 5 to 10-fold reduction compared to D614G. Individual mutations that are characteristic of the B.1.1.7 and B.1.351 variants had a similar impact on neutralization when tested in VSV or in lentivirus PsVN assays. Despite the observed decreases, the GMT of VSV PsVN titers in human vaccinee sera against the B.1.351 variant remained at ~1/300. Taken together these data demonstrate reduced but still significant neutralization against the full B.1.351 variant following mRNA-1273 vaccination."

medRxiv: [Harnessing testing strategies and public health measures to avert COVID-19 outbreaks during ocean cruises](#) (posted 25 January 2021)

"To ensure the safe operation of schools, workplaces, nursing homes, and other businesses during COVID-19 pandemic there is an urgent need to develop cost-effective public health strategies. Here we focus on the cruise industry which was hit early by the COVID-19 pandemic, with more than 40 cruise ships reporting COVID-19 infections. We apply mathematical modeling to assess the impact of testing strategies together with social distancing protocols on the spread of the novel coronavirus during ocean cruises using an individual-level stochastic model of the transmission dynamics of COVID-19. We model the contact network, the potential importation of cases arising during shore excursions, the temporal course of infectivity at the individual level, the effects of social distancing strategies, different testing scenarios characterized by the tests sensitivity profile, and the testing frequency.

Our findings indicate that PCR testing at embarkation and daily testing of all individuals aboard, together with increased social distancing and other public health measures, should allow for rapid detection and isolation of COVID-19 infections and dramatically reducing the probability of onboard COVID-19 community spread. In contrast, relying only on PCR testing at embarkation would not be sufficient to avert outbreaks, even when implementing substantial levels of social distancing measures."

News in Brief

The WHO warns of a 'pandemic paradox' – where vaccine availability and a sense of things getting better or going away when new variants emerge and pose danger ([WHO](#)).

"Why did the world's pandemic warning system fail when COVID hit? Nearly one year ago, the World Health Organization sounded the alarm about the coronavirus, but was ignored" ([Nature](#)).

The New Variants

Denmark is sequencing all coronavirus samples, and it doesn't look good, especially with the UK variant ([WashPo](#)).

"Evidence is growing that some coronavirus variants could evade immune responses triggered by vaccines and previous infections" ([Nature](#)).

Case in point: New data from Moderna suggest "a very slight, modest diminution in the efficacy" of the company's vaccine against the South Africa variant; the company is investigating a variant booster for the B.1.351 lineage ([STAT](#); [Moderna](#); see also: [bioRxiv preprint posted 25 January 2021](#)).

Oh, and the UK variant may not only be more transmissible, but also more deadly ([AP](#); see also: [UK paper with data \[pdf\]](#)).

"'A complete massacre, a horror film': inside Brazil's Covid disaster: Hospitals in Amazonas state overwhelmed after surge in infections linked to new variant, leaving many without even the most basic supplies" ([Guardian](#))

Speaking of Brazil... the coronavirus variant there (called P.1) has been confirmed in a Minnesota patient who had traveled to the country ([NPR](#)).

And the B.1.351 variant (aka the South Africa variant) has been documented in South Carolina in 2 people with no travel history ([WashPo](#)).

Need a crash course in the coronavirus variants? This article gives a good and simple breakdown ([WashPo](#)).

Video (1 hour): "Emerging SARS-CoV-2 variants: what you need to know" ([MJH](#); webinar recorded 26 January 2021 and requires registration to watch)

Transmission and Mitigation Measures

Germany now requires medical style masks instead of cloth masks on public transport or in supermarkets ([WashPo](#)).

Should we wear 2 masks? Dr. Fauci thinks it 'just makes common sense' ([Today](#); see also: [commentary from Med](#))

"'I would prefer that somebody wore one mask properly than two masks improperly, but if you can wear two masks properly, that's great.'" ([BuzzFeed](#)).

Vaccines

The one-dose, fridge stable COVID-19 vaccine from Johnson & Johnson is 66% effective; the company expects to file EUA with the FDA in early February ([STAT](#); see also: [NIH press release](#)).

The Novavax COVID-19 vaccine is 90% effective overall but is only 49-60% against the South Africa variant ([STAT](#)).

Citing a lack of immune response to protect against the coronavirus, Merck will stop development on its 2 potential COVID vaccines and concentrate on treatments and other therapies ([STAT](#)).

It will take time before we know if COVID vaccination efforts are working, although trends suggest a positive impact ([Nature](#)).

A Wisconsin pharmacist has pled guilty to tampering and ruining Moderna vaccine doses ([NPR](#)).

"The vaccines are phenomenal. Belaboring their imperfections—and telling people who receive them never to let down their guard—carries its own risks" ([Atlantic](#)).

Vaccines – Who's Getting Them?

"Slightly more than 6% of American adults have received at least the first dose of the COVID-19 vaccine — but a disproportionately small number of them are Black and Hispanic people" ([NPR](#)).

There's still debate on vaccine guidance for people who are lactating with some experts asserting it is based on faulty assumptions ([STAT](#)).

As vaccine shortages increase across the country, some vials sit on shelves ([WashPo](#)).

"Oregon health-care workers were stuck in a snowstorm with expiring vaccines. So, they gave shots to strangers caught in traffic" ([WashPo](#)).

In a similar vein, maybe the key to countering falling immunization rates in general during the pandemic is to bring the vaccines to the patient, especially for pediatrics ([STAT](#)).

Video (2 mins): "Why it's taking so long to vaccinate America" ([KHN YouTube](#)).

Treatments

According to new data, Eli Lilly's antibody cocktail – bamlanivimab plus etesevimab – reduced risk of hospitalization and death in high-risk COVID patients ([PRNewswire](#)).

Regeneron's antibody cocktail, REGEN-COV, given as prophylaxis for household contact exposure blocked symptomatic COVID-19 and cut infections by 50% ([Regeneron](#)).

The company also reported that REGEN-COV is active against the UK and South African variants ([Regeneron](#)).

Data from the [PRINCIPLE trial](#) show there is no benefit to azithromycin and doxycycline for COVID-19 patients over 50 and treated at home ([NIHR](#)).

Supply Versus Demand

"Why N95 masks are still in short supply in the U.S." ([NPR](#)).

"The U.S. government's effort to squeeze more doses from Pfizer Inc's COVID-19 vaccine vials is spurring unanticipated demand for specialized syringes that the world's largest syringe supplier says exceeds existing capacity" ([Reuters](#)).

There's also a shortage of public health workers to administer vaccines in some states ([NBC](#)).

Mental Health and Resilience

"Kids already coping with mental disorders spiral as pandemic topples vital support systems" ([KHN](#)).

This article outlines seven ways to build a child's resilience during the pandemic ([WashPo](#)).

Thanks, Coronavirus

"The pandemic has erased entire categories of friendship" ([Atlantic](#)).

The coronavirus baby boom is a bust, actually; data suggest significant drops in December 2020 births compared to 2019 ([NBCLX](#); see also: [pandemic family talk presentation](#)).

An elderly gorilla at the San Diego Zoo who had COVID-19 (the B.1.429 variant) with pneumonia was treated with monoclonal antibody therapy and antibiotics; veterinarians at the zoo are also considering use of a recombinant purified spike protein vaccine in some animals ([NPR](#); see also: [San Diego Zoo press release](#)).

"The spread of other dangerous germs is surging — a result, in part, of the chaotic response to the pandemic" ([NYT](#)).

And Now for Something Completely Different – With a Naval Twist

In case you missed it, [sea shanties](#) have taken social media by storm the last few weeks.

It started with [a TikTok of the Wellerman](#). Then came [harmonies and instruments, along with a remix](#), and other songs like [Drunken Sailor](#). Folks wrote explainers [on the song's meaning, the true story behind the song](#), and [about the sea shanty trend](#).

But it hasn't stopped with old sea shanties – pop hits like [Nickelback's 'Rockstar'](#) got the sea shanty treatment. (Not to be outdone, the [US Navy Band went with Taylor Swift](#).) Sea shanties are alive and well, as this [2015 video of a Norwegian crew](#) returning to port shows.

2020 was the year of the pandemic; maybe 2021 can be the year of the sea shanty.

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